

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU03/01143

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. ⁷ : G01M 3/28, F16L 55/134, 55/163, G01N 21/88		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) DWPI, JAPIO keywords: pipe+, conduit, tube, tubing, tubular; inflat+, deflat+, expand+, swell+, bulg+, flat+, relax+, collapse+, patch+, repair+, mend+, close, closing, closure; detect+, test+, inspect+ & similar words; leak, pressure, hydrostatic; bladder, seal+, packer & similar words; camera, CCD, CCTV, optical (s) inspect+, adher+, adhesive, stick+, stuck; appl+, jig, former, feed+, fed; corner, bend, curv+; IPC G01M 3/-, F16L 55/-, G03B 29/-, G01N 21/88		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4995761 A (BARTON) 26 February 1991 See the entire document, in particular, columns 4-5	1,2,4,6,15,16,18,20,22, 23,25,27
Y		3,5,17,19,21,24,26,28
X	US 6276398 B1 (LANGE) 21 August 2001 Columns 2-5; Figs. 1-8	1,2,4,6,15,16,18,20,22, 23,25,27
Y		3,5,17,19,21,24,26,28
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier application or patent but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art</p> <p>"&" document member of the same patent family</p>		
Date of the actual completion of the international search 7 October 2003		Date of mailing of the international search report 14 OCT 2003
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929		Authorized officer JULIA HU Telephone No: (02) 6283 2754

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2002/0083990 A1 (LUNDMAN) 4 July 2002 See the entire document	1,2,4,6,15,16,18, 20,22,23,25,27 3,5,17,19,21,24, 26,28
X Y	US 4691728 A (MATHISON) 8 September 1987 Figs. 1-2; column 3 line 40 - column 4 line 40; column 7 lines 22-63	8,9,11,13 10,12,14
X Y	Patent Abstracts of Japan, JP 08-159978 A (OUGIYA KOJI KK et al.) 21 June 1996 See abstract	8,9,11,13 10,12,14
X Y	Derwent Abstract Accession No. 2002-645510/70, Class Q69;S02, DE 20207638U1 (IBAK HUNGER GMBH & CO KG HELMUT) 22 August 2002 See abstract	8,9,11,13 10,12,14
Y	Patent Abstracts of Japan, JP 2000-146077 A (TOYO TIRE & RUBBER CO LTD) 26 May 2000 See abstract, drawings	3,5,10,12,14,17, 19,21,24,26,28
Y	US 4872336 A (BAILLIE) 10 October 1989 Fig. 1	3,5,10,12,14,17, 19,21,24,26,28

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C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Patent Abstracts of Japan, JP 11-115051 A (TOKYO GAS CO LTD) 27 April 1999 See abstract, drawings	
A	Patent Abstracts of Japan, JP 08-156093 A (HAKKO CO LTD) 18 June 1996 See abstract	
A	WO 98/54509 A (BARRY) 3 December 1998 See the entire document	
<p>NOTE: For the "Y" indications, each of US 4995761 and US 6276398 can be combined with any of JP 2000-146077 or US 4872336 with regard to claims 3,5,17,19,21,24,26 and 28; US 2002/083990 can be combined with any of US 4995761 or US 6276398 with regard to claims 1,2,4,6,15,16,18,20,22,23,25 and 27, and can be further combined with any of JP 2000-146077 or US 4872336 with regard to claims 3,5,17,19,21,24,26 and 28; Each of US 4691728, JP 08-159978 and DE 20207638 can be combined with any of JP 2000-146077 or US 4872336 with regard to claims 10, 12 and 14.</p>		

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

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This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member			
US	4995761	CA	2059643	EP	0489090
		WO	9102920	US	5049003
US	6276398				
US	2002083990				
US	4691728				
JP	8159978				
DE	20207638				
JP	2000146077				
US	4872336				
JP	11115051				
JP	8156093				
WO	9854509	AU	75137/98	EP	1015805
				NZ	501983
END OF ANNEX					